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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------|-------------|----------------------|---------------------|------------------|
| 10/776,935 | 02/10/2004 | Takashi Watanabe | 60827 (70840) | 2391 |
| 21874 | 7590 | 07/14/2005 | | EXAMINER |
| EDWARDS & ANGELL, LLP | | | | VU, HUNG K |
| P.O. BOX 55874 | | | | |
| BOSTON, MA 02205 | | | ART UNIT | PAPER NUMBER |
| | | | 2811 | |

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|-------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/776,935 | WATANABE, TAKASHI |
| | Examiner | Art Unit |
| | Hung Vu | 2811 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 22 April 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1015 is/are pending in the application.
 4a) Of the above claim(s) 11-15 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-10 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. _____
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____ 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Invention of Group I, Claim 1-10, in the reply filed on 04/22/05 is acknowledged. The traversal is on the ground(s) that a comprehensive search for the invention of Group I would necessarily involve a search of, as well as consideration of references appearing in, the classes/subclasses associated with the invention of Group II. This is not found persuasive because it is well settled that related inventions are restrictable if it is shown that these inventions distinct. It was clearly established that these inventions are in fact distinct.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 11-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 04/22/05.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Miida (PN 6,504,194).

Miida discloses, as shown in Figures 1-17, a solid-state imaging device, comprising:

at least one pixel section;

a control section for controlling an operation of the at least one pixel section;

wherein:

the at least one pixel section includes:

a light receiving section (15a) for outputting charges by performing photo-electric conversion of light incident thereon, and

a transistor section (112) having a charge accumulation region (25) for accumulating the charges output by the light receiving section;

the transistor section outputs an output signal representing a voltage value corresponding to an amount of charges accumulated in the charge accumulation region;

the control section, for resetting the charges accumulated in the charge accumulation region after the output signal is output from the transistor section, injects charges into the charge accumulation region before discharging the accumulated charges from the charge accumulation region (see Figure 8).

Regarding claim 2, Miida discloses the device further comprising a substrate, wherein:

the transistor section further includes a gate electrode (19), a source electrode (16a), and a drain electrode (17a);

the control section injects the charges into the charge accumulation region from the substrate by applying a first gate voltage to the gate electrode.

Regarding claim 8, Miida discloses the device including a plurality of plural section which are arranged in a matrix (see Figure 8).

Regarding claim 10, Miida discloses the at least one pixel section further includes a substrate including a well region (12);

the transistor section includes:

an annular gate electrode (19),

a source electrode (16a) surrounded by the gate electrode,

a drain electrode (17a) surrounding the gate electrode,

a channel region provided at a position which is in the well region and below the gate electrode;

the charge accumulation region is provided at a position which is in the well region and below the channel region, so as to surround the source electrode, and

the transistor section is connected to the light receiving section via the well region.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miida (PN 6,504,194).

Miida discloses the claimed invention including the solid-state imaging device. Miida further discloses the voltage is applied to the gate electrode. Miida does not disclose the values of the voltage applied to the gate electrode to operate the device. However, claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does ."(emphasis in original) Hewlett - Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung K. Vu whose telephone number is (571) 272-1666. The examiner can normally be reached on Mon-Thurs 6:00-3:30, alternate Friday 7:00-3:30, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (571) 272-1732. The Central Fax Number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Vu

July 7, 2005

Hung Vu
Hung Vu

Primary Examiner